

MISCELLANEOUS NOTES

from Arunachal Pradesh or from Assam after Col. Baigui and G. Mann respectively.

The collection of H. Collett from Luchin, Shan states housed at Central National Herbarium (CAL) is also identified as *Acrorumohra diffracta* (Baker) H. Ito. It was not earlier reported from Burma. It is interesting to note that both Indian and Burma collections were made much earlier than A. Henry (1898) from China in 1874 and 1888 respectively. Thus it shows its distributional ranges from Taiwan, China mainland, Indo-China, Burma and North East India (Arunachal Pradesh).

For easy identification, the species is described below.

Acrorumohra diffracta (Baker) H. Ito in Nakai et Honda, Nov. Fl. Jap. 4: 104. 1939; Deval C. W. E. & Kuo, C. M. in Fl. Taiwan 1: 360. Pl. 127. 1975. *Nephrodium diffracta* Baker in Kew Bull. 1898: 230. 1898. *Aspidium diffractum* Christ in Bull. Herb. Bioss. 7: 17. 1899. *Dryopteris diffracta* C. Chr. in Ind. Fil. 262. 1905. *Dryopteris reflexipinna* Hayata in Ic. Pl. Form. 4: 174. Pl. 113. 1914; C. Chr. Ind. Fil. Suppl. 16. 1913-17; *Rumohra diffracta* (Baker) Ching in Sinensia. 5: 1. 69. Pl. 18. 1934.

CRYPTOGAMIC UNIT,
BOTANICAL SURVEY OF INDIA,
HOWRAH-711 103,
December 21, 1982.

41. AN INTERPRETATION OF *BAUHINIA* L. (*SENSU LATO*)
SPECIES ILLUSTRATED IN VAN RHEEDE'S HORTUS
MALABARICUS (1678-1703)

The plates *Chovanna-mandaru* (Hort. Malab. 1: 58. t. 32. 1678), *Chovanna-mandaru* (Hort. Malab. 1: 59. t. 33. 1678), *Veluttamandaru* (Hort. Malab. 1: 61. t. 34. 1678), *Canschena-*

Type: Yunnan, Mentze. A. Henry 9028, Description (Photo!)

Rhizome short erect to ascending densely clothed with dark brown, palaceous scales, stipes brown, glabrous, 20-40 cm long; Lamina 25-40 cm long, 15-30 cm broad, quadripinnate, deltoid to broadly ovate; pinnae from rachis deflexed, more in first pair of the lower pinna, this gives the rachis a zig-zag form; rachis stramineous, shiny, glabrous; pinnae 6-8 pairs, petiole reflexed, segments flabellate, undulate to crenate; pinnules chartaceous in texture, green even when dried; veins free 2-4 furked, nor reaching to the margin; sori on the vein end; indusium persistent, reniformed with undulate margin.

Specimen Examined:

INDIA: Arunachal Pradesh, Duphla Hills, 2100 m. 1874, Col. Baigui s. n. (Acc. Nos. 16801, 16802, 16904 — CAL).

BURMA: Shan States, Luchin, 900 m, Feb. 1888, H. Collett s. n. (CAL).

ACKNOWLEDGEMENTS

I thank Dr. G. G. Maiti for his valuable suggestions in preparing the manuscript.

B. GHOSH

pou (Hort. Malab. 1: 63. t. 35. 1678), *Mandaru-valli* (Hort. Malab. 8: 55. t. 29. 1688), *Naga-mu-valli* (Hort. Malab. 8: 57. t. 30. 1688) and *Naga-mu-valli* (Hort. Malab. 8: 57. t. 31.

1688) in van Rheede's Hortus Malabaricus (1678-1703) are illustrations of plants belonging to the genus *Bauhinia* L. (*sensu lato*). In his bibliography to Rheede's Hortus Malabaricus (1678-1703), Dennstedt (1818) identified *Chovanna-mandaru* Rheede as *Bauhinia variegata* L., *Chovanna-mandaru* Rheede as *B. purpurea* L., *Velutta-mandaru* Rheede as *B. acuminata* L., *Canschena-pou* Rheede as *B. tomentosa* L., *Mandaru-valli* Rheede as (*Nagavalli* on plate) as *B. divaricata* L. and the plates *Naga-mu-valli* Rheede (as *Serpata-valli* on plate) as *B. scandens* L. The correct identity and up-to-date nomenclature of all the seven plates mentioned above are discussed here.

The word 'Mandaru' in Hortus Malabaricus (1678-1703) is derived from the local name 'Mandaram' in Malayalam, commonly used for the flowers of *B. purpurea*.

1. CHOVANNA-MANDARU Rheede, Hort. Malab. 1:57. t. 32. 1678.

Linnaeus (1753) referred Rheede's plate *Chovanna-mandaru* to *B. variegata* L. and also gave the locality of the species as Malabar. Hence there is little doubt as to the identity of this plate and Dennstedt (1818), Hamilton (1822) and Dylwin (1839) further confirmed this.

The name *Chovanna-mandaru* in the native language Malayalam refers to the red flowers of the plant. The flowers in this case are purplish-pink with the upper most petal darker and variegated with yellow stripes. Hamilton (1822), Roxburgh (1832) and de Wit (1956) considered *B. candida* Ait., a plant with white flowers, as a variety of *B. variegata*, namely *B. variegata* L. var. *alboflava* de Wit. The up-to-date nomenclature of the species is as follows.

Bauhinia variegata L. Sp. Pl. 375. 1753; Dennst. Schul. 10. 1818; Ham. in Trans. Linn. Soc. London 13: 497. 1822; DC. Prodr. 2: 514.

1825; Roxb. Fl. Ind. (ed. Carey) 2: 319. 1832; Wt. et Arn. Prodr. 296. 1834; Dylwin, Review Ref. Hort. Malab. 2. 1839; Baker in Hook. f. Fl. Brit. Ind. 2: 284. 1878; Prain in J. Asiat. Soc. Beng. 66(2): 505. 1897; de Wit in Reinwardtia 3: 411. 1956. — *B. variegata* (L.) Willd. sec. Roxb. Fl. Ind. (ed. Carey) 2: 319. 1832. — *Phanera variegata* (L.) Benth. in Miq. Pl. Jungh. 2: 262. 1852. — *Bauhinia candida* Ait. Hort. Kew. 2: 49. 1789. — *B. variegata* var. *condida* (Ait.) Corner, Ways. Trees Mal. 383. 1940.

Type: L. 908. 112-142 (Neotype, duplicate of it i.e. Modhupore, Bogra, Bengal R. E. P. 12187 in BSIS!).

Distribution: Possibly a native of China cultivated in other countries including India and Malaysia.

2. CHOVANNA-MANDARU Rheede, Hort. Malab. 1: 61. t. 34. 1678.

Rheede's plate *Chovanna-mandaru* is the only reference which Linnaeus (1753) gave under *B. purpurea* L. in Species Plantarum. Hamilton (1822) also interpreted the plate as *B. purpurea* and diagnosed the plant as differing from *B. variegata*. Because of the purple petals of this plant, Rheede (1678) named it *Chovanna-mandaru*, an appellation which he had already used for *B. variegata*. Authors like Dennstedt (1818), Roxburgh (1832) and Dylwin (1839) rightly identified *Chovanna-mandaru* as *B. purpurea* with the following nomenclature.

Bauhinia purpurea L. Sp. Pl. 375. 1753; Dennst. Schul. 10. 1818; Ham. in Trans. Linn. Soc. London 18: 497. 1822; Roxb. Fl. Ind. (ed. Carey) 2: 320. 1832; Wt. et Arn. Prodr. 296. 1834; Dylwin, Review Ref. Hort. Malab. 2. 1839; Baker in Hook. f. Fl. Brit. Ind. 2: 284. 1878; Prain in J. Asiat. Soc. Beng. 66(2): 180. 1897; de Wit in Reinwardtia 3: 406. 1956 — *B. coromandelina* DC. Prodr. 2: 515.

1825. — *B. triandra* Roxb. Fl. Ind. (ed. Carey) 2: 320. 1832. *Phanera purpurea* (L.) Benth. in Miq. Pl. Jungh. 1: 262. 1852.

Type: Merrill, Sp. Blancoanae no. 1050 (L. 920. 278-111, Neotype).

Distribution: South-east Asia.

3. *Vellutta-mandaru* Rheede, Hort. Malab. 1: 61. t. 34. 1678.

Linnaeus (1753) in describing *B. acuminata* L. referred to Rheede's plate *Velutta-mandaru*. Subsequently Dennstedt (1818), Hamilton (1822) and Dylwin (1839) also identified the plate as *B. acuminata*. However De Candolle (1825) referred *Vellutta-mandaru* to *B. variegata* erroneously as the flowers of the former are white as against the red flowers in *B. variegata*. Similarly *B. candida* Ait. which is often treated as a synonym of *B. acuminata* also has purple-blotched or striped flowers. Eventhough Aitchinson's (1789) description is insufficient to distinguish *B. candida* from *B. acuminata*, the meaning of the name *Vellutta-mandaru* in Hortus Malabaricus is quite diagnostic, referring to its white flowers.

Bauhinia acuminata L. Sp. Pl. 375. 1753; Dennst. Schul. 17. 1818; Ham. in Trans. Linn. Soc. London 13: 497. 1822; DC. Prodr. 2: 513. 1825; Wt. et Arn. Prodr. 295. 1834; Dylwin, Review Ref. Hort. Malab. 3. 1839; Baker in Hook. f. Fl. Brit. Ind. 2: 276. 1878; Prain in J. Asiat. Soc. Beng. 59 (2): 244. 1890; *ibid.* 66 (2): 179. 1897; de Wit in Reinwardtia 3: 393. 1956. — *B. candida* Ait. *sensu* DC. Prodr. 2: 513. 1825.— *B. tomentosa* Naves in Blanco. Fl. Filip. J. Sci. (Bot.) 2: 433. 1907.

Type Herman, Ceylon Herb. 148 (BM).

Distribution. South-east Asia.

4. CANSCHENA-POU Rheede, Hort. Malab. 1: 63, t. 35. 1678.

The plate shows a twig with flowers and fruits. Linnaeus (1753), Dennstedt (1818) and Dylwin (1839) identified it as *B. tomentosa*

L. Hamilton (1822) eventhough considered *B. tomentosa* as 'the most improper appellation' for this species as the fully grown leaves are devoid of tomentum, also agreed to Linnaeus (1753) on the identity of the plate.

Bauhinia tomentosa L. Sp. Pl. 375. 1753; Dennst. Schul. 10. 1818; Ham. in Trans. Linn. Soc. London 13: 498. 1822; DC. Prodr. 2: 514. 1825; Roxb. Fl. Ind. 2: 323. 1832; Wt. et Arn. Prodr. 295. 1834; Dylwin, Review Ref. Hort. Malab. 3. 1839; Baker in Hook. f. Fl. Brit. Ind. 2: 275. 1878; Prain in J. Asiat. Soc. Beng. 66(2): 178. 1899; de Wit in Reinwardtia 3: 409. 1956 — *B. pubescens* DC. Mem. XIII Leg. 483. 1825.

Type: Cult. Bogor Botanic garden, I. B. 9a (Neotype: L. 950. 287-613).

Distribution. Indigenous to South-east Asia.

5. MANDARU-VALLI Rheede, Hort. Malab. 8: 55. t. 29. 1688 (*Nagavalli* vel *Mandaru-valli* on plate).

6. NAGA-MU-VALLI Rheede, Hort. Malab. 8: 57. t. 30, 31. 1689 (*Serpata-valli* on plate).

Rheede's plates *Mandaru-valli* and *Naga-mu-valli* are the figures of one and the same plant in two different stages of growth. Dennstedt (1818) identified both *Mandaru-valli* and *Naga-mu-valli* as *B. divaricata* L. which is now known as a monandrous South American species (de Wit 1956) not recorded from Old World. Prior to Dennstedt (1818), Linnaeus (1753) quoted *Mandaru-valli* when he described *B. scandens* L. and from the note he had given under *B. scandens* in Species Plantarum, it is clear that *Naga-mu-valli* was the plant which he intended as typical of the species. Further, Linnaeus (1754) in Stickman's Herbarium Amboinense also identified *Folium linguae* Rumph. (Herb. Amb. 5: 1. Pl. 1. 1747) with *B. scandens* L. Pointing out this as a mistake, Merrill (1917) identified *Folium linguae* Rumph. with *B. lingua* DC. (*Phanera*

lingua (DC.) Miq.). Because of this confusion, the name *B. anguina* Roxb. was often used for the plant under discussion even though it was a later synonym of *B. scandens* L.

In giving the nomenclature of the species under *Bauhinia*, the concept of Taubert (1894) and Hutchinson (1964) is accepted here as against that of de Wit (1956) who recognised *Lasiobema* (Korth.) Miq. as a distinct genus with *L. scandens* (L.) de Wit (*B. scandens* L.) as the type species.

Bauhinia scandens L. Sp. Pl. 374. 1753; Dennst. Schul. 13. 1818; Roxb. Fl. Ind. (ed. Carey) 2: 326. 1832; Dylwin, Review Ref., Hort. Malab. 39. 1839; Prain in J. Asiat. Soc. Beng. 66(2): 94. 1897 — *Phanera scandens* (L.) Rafin Sylv. tell. 122. 1838 — *Bauhinia anguina* Roxb. Hort. Beng. 31. 1814 (*nom. nud.*); Pl. Corom. 3: 82. pl. 285. 1819 & Fl.

BOTANICAL SURVEY OF INDIA,
CALCUTTA - 700 016,
October 28, 1982.

Ind. (ed. Carey) 2: 328. 1832; DC. Prodr. 2: 516. 1825; Wt. et Arn. Prodr. 298. 1834; Baker in Hook. f. Fl. Brit. Ind. 2. 284. 1878. — *Lasiobema anguinum* (Roxb.) Korth. ex Miq. Fl. Ind. Bat. 1(1): 71. 1855 — *L. horsfieldii* Miq. Fl. Ind. Bat. 1(1): 71. 1855. — *B. horsfieldii* (Miq.) Macbride, Contr. Gray Herb. II no. 59: 23. 1919. — *Lasiobema scandens* (L.) de Wit, Reinwardtia 3: 427. 1956.

Type: *Horsfield* s.n. (L. 169). Java (Holotype, K).

Distribution: India, Indo-China and possibly Sri Lanka.

ACKNOWLEDGEMENT

I am grateful to Dr. K. Thothathri, Deputy Director, Central National Herbarium, Botanical Survey of India, Howrah for critically reading the manuscript.

K. K. N. NAIR¹

REFERENCES

- BAKER, J. G. (1876-78): Leguminosae in J. D. Hooker's Flora of British India. Vol. 2 (Pt. IV & V). London.
- BURKILL, I. H. (1965): Chapters in the History of Botany in India. Delhi.
- CANDOLLE, A. P. DE (1825): Prodr. Systematis Naturalis Regni Vegetabilis. etc. Vol. 2. Paris.
- DENNSTEDT, A. W. (1818): Schlüssel Zum Hortus Indicus Malabaricus oder dreifaches Register zu diesem, Werke. Weimar.
- DE WIT, H. C. D. (1956): A revision of Malaysian Bauhinieae. *Reinwardtia* 3(4): 381-541.
- DYLLWYN, L. N. (1839): A review of the references to Hortus Malabaricus of H. van Rheedee van Draakenstein. Swansea.
- HAMILTON, B. (1822): A commentary on Hortus Malabaricus Pt. 1. *J. Linn. Soc. London* 13: 474-560.
- JOHNSTON, M. C. (1970): Still no herbarium records for Hortus Malabaricus. *TAXON* 19(4): 655.
- LAMARCK, J. B. A. P. M. DE (1788): Encyclopedie Methodique Botanique Vol. 2. (Pt. 2). Paris.
- LINNAEUS, C. (1753): Species Plantarum, Vol. 2. Holmiae.
- MANITZ, H. (1968): August Wilhelm Dennstedt's Schlüssel zum Hortus Indicus Malabaricus. *TAXON* 17(5): 496-59.
- MERRILL, E. D. (1917): An Interpretation of *Rumphilus Amboienense*. Paris.
- RAIZADA, M. B. (1954): Hortus Malabaricus Madras State Herbarium Centenary Souvenir (1954): 64-69.
- RHEEDE, H. VAN DRAAKENSTEIN, et al. (1678-1703): Hortus Indicus Malabaricus. 12 Vols. Amsterdam.
- RICKET, H. W. & STAFLEU, F. A. (1961): Nomina

¹ Present address: Kerala Forest Research Institute, Peechi-680 653, Kerala.

MISCELLANEOUS NOTES

Generica Conservanda et Rejicienda Spermatophytorum VII. Bibliography. *TAXON* 10(3): 70-91.

ROXBURGH, W. (1832): *Flora Indica*. Vol. 3. Serampore.

RUMPHIUS, G. E. (1692): *Herbarium Amboinense*. Baarn.

STAFLEU, F. A. (1975): Roxburgh William, *Flora Indica* ... *TAXON* 24 (5&6): 685-686.

STICKMAN, (1754): *Herbarium Amboinense*. Vpsaliae.

TAUBERT P. (1874): Leguminosae in Engler & Prantl. *Die naturlichen Pflanzenfamilien* 3(3): 70-385. Berlin.

THOTHATHRI, K. & NAIR, K. K. N. (1981): Dalbergias in Hortus Malabaricus. *TAXON* 30(1): 43-47.

THWAITES, G. H. K. (1858-64): *Enumeratio Plantarum Zeylaniae*. An enemeration of Ceylon Plants (Assisted by J. D. Hooker). London.

WARNER, M. F. (1920): The dates of Rheede's Hortus Malabaricus. *J. Bot.* 58: 291-92.

WILLDENOW, C. L. (1802): *Species Plantarum* Vol. 3 (pt. II). Berlin.

WIGHT, R. & WALKER, G. A. (1834): *Prodromus Florae Peninsulae Indiae Orientalis*. London.